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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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15 OCT 2004

Applicant's or agent's file reference 11137P3 WORH	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (PCT/PEP/409)	
International application No. PCT/GB 03/04416	International filing date (day/month/year) 10.10.2003	Priority date (day/month/year) 12.10.2002
International Patent Classification (IPC) or both national classification and IPC C11D17/00		
Applicant RECKITT BENCKISER INC et al.		



- This International preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 6 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of 3 sheets.

- This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 26.03.2004	Date of completion of this report 14.10.2004
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Klier, E Telephone No. +49 89 2399-8531 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/GB 03/04416**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*):

Description, Pages

1-17 as originally filed

Claims, Numbers

1-20 received on 27.07.2004 with letter of 20.07.2004

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1 - 20
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1 - 20
Industrial applicability (IA)	Yes: Claims	1 - 20
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item I

Basis of the report

The applicant filed an amended set of claims.

The amendments filed with the letter dated 20.07.04 introduce subject-matter which extends beyond the content of the application as filed, contrary to Article 34(2)(b) PCT.

The amendments concerned are the following:

claims 1 and 11: at least one clay thickener with at least one further thickener selected from polysaccharides, polycarboxylates, and polyacrylamides. The combination of clay thickener and polyacrylamides has no basis in the original filed application. Original claims 3 - 5 merely discloses combinations of a mixture of polysaccharide, polycarboxylate, and clay.

These claims are interpreted for this IPER as if a combination of polyacrylamide and clay were not claimed.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

- D1: US-A-4 767 563 (DE BUZZACCARINI FRANCESCO) 30 August 1988 (1988-08-30)
- D2: US-A-4 758 377 (IDING STEPHEN H ET AL) 19 July 1988 (1988-07-19)
- D3: WO 97/21795 A (UNILEVER PLC ;UNILEVER NV (NL)) 19 June 1997 (1997-06-19)
- D4: WO 99/11123 A (JOHNSON & SON INC (US)) 11 March 1999 (1999-03-11)
- D5: DE 39 27 908 A (SCHUELKE & MAYR GMBH) 28 February 1991 (1991-02-28)
- D6: WO 01/44430 A (UNILEVER PLC ;LEVER HINDUSTAN LTD (IN); UNILEVER NV (NL)) 21 June 2001 (2001-06-21)
- D7: US-A-4 676 920 (CULSHAW STEPHEN) 30 June 1987 (1987-06-30)

1. The subject-matter of claims 1 - 20 is novel (Art. 33(2) PCT).

1.1. None of the above documents discloses the combination of features of

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independent claims 1 or 11.

2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1 - 20 does not involve an inventive step in the sense of Article 33(3) PCT.

- 2.1. The object of the application is the provision of cleaning and/or disinfectant composition that is particularly useful in the disinfection of surfaces where Gram positive and/or Gram negative type bacteria are suspected (page 1, lines 7 - 12).

According to the description on page 2, lines 14 - 21 a combination of caustic and alcohol and/or glycol ether provides good broad spectrum germicidal efficiency and/or good cleaning on hard surfaces.

Table 1 of the application discloses cleaning compositions which are effective against *Salmonella choleraesuis* and *Pseudomonas aeruginosa*.

- 2.2. D4 describes the disinfecting properties of hard surface cleaning compositions comprising a low amount of aliphatic alcohol and glycol ethers at a pH ranging from 4.0 to 13.0, ideally from 9.5 to 12.5. The compositions also comprise anionic surfactants and thickeners (page 3, line 28 - page 4, line 5; paragraph bridging pages 4 and 5; page 10, lines 11 - 16; page 9, 1st paragraph; examples; tables).

D5 discloses the disinfecting properties of alcohols and glycol ethers (page 2, lines 15 - 3). The alcohols and glycol ether are very effective against Gram positive and Gram negative bacteria (page 2, line 65 - page 3, line 2). Alkaline disinfecting compositions comprising alkane sulphonate, NaOH, isopropanol and o-phenylphenol and p-chloro-meta cresol are also disclosed (page 6, lines 60 - 65).

D6 describes the antimicrobial effect of nonionic surfactants at an alkaline pH (page 2, lines 19 - 29; page 4, lines 24 - 32; claims 1 - 8).

In this respect it is noted that all the examples of the application comprise a nonionic surfactant.

D3 describes antimicrobial cleaning compositions. The combination of alcohol and nonionic surfactant provides a synergistic bactericide effect (page 5, lines 2 - 8;

examples). Above a pH of 9.5 the compositions are more bactericidal than at a lower pH (page 9, lines 28 - 34).

2.3. D4 could be regarded as the closest prior art.

Independent claim 1 differs from the examples of D4 in that selected abrasives and thickeners are present.

The problem to be solved by the present invention may therefore be regarded as to further improve the cleaning properties.

The solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons.

It is known to add abrasives in order to improve the cleaning properties (D1: column 3, lines 36 - 58) and to added thickening agents in a need to increase the time the consumer can wipe the composition before it runs down a vertical surface (D4: page 10, lines 11 - 16; D1: column 4, lines 45 - 53, claim 9).

The same conclusion has to be drawn by starting from D5 as the closest prior art.

The same is true for the subject-matter of independent claim 11 and the dependent claims.

2.4. Without any comparative data, an inventive step cannot be acknowledged.

Alleged advantages should be supported by sufficient evidence where comparison is made with highly pertinent prior art.

In assessing the inventive step of a combination of features consideration must be given to a feature only if the applicant has provided evidence that it contributes either independently or in conjunction with one or more of the other features, to the solution of the problem set in the description.

The extend of the patent monopoly should correspond to and be justified by the technical contribution of the art.

In order to be patentable this combination of known ingredients must not be arbitrary but must be justified by a hitherto unknown/unexpected effect which is caused by the combination of features which distinguish the claimed compositions from the numerous other compositions

Claims:

1. A liquid cleaning and disinfecting composition comprising:
an alkaline source;
5 at least one anionic surfactant;
at least one clay thickener with at least one further thickener selected from
polysaccharides, polycarboxylates, and polyacrylamides;
a solvent selected from alcohols, glycol ethers, and mixtures thereof;
at least one abrasive material selected from oxides, carbonates, quartzes, siliceous
10 chalk, diatomaceous earth, colloidal silicon dioxide, alkali metasilicates, organic
abrasive materials selected from polyolefins, polyethylenes, polypropylenes,
polyesters, polystyrenes, acetonitrile-butadiene-styrene resins, melamines,
polycarbonates, phenolic resins, epoxies and polyurethanes, natural materials
selected from rice hulls, corn cobs, and the like, nepheline syenite, or talc and
15 mixtures thereof;
water; and
optionally, one or more materials selected from further surfactants, perfumes and
perfume stabilizers, builders, rheology stabilizers; pH and buffering agents,
electrolytes, pigments, and colorants.
20 2. The composition according to claim 1 wherein the alkaline source is selected from
alkaline metal hydroxides, carbonates, bicarbonates, and mixtures thereof.
3. The composition according to any one of claims 1 and 2 wherein the thickener is
a mixture of polysaccharide and clay.
~~4. The composition according to any one of claims 1 and 2 wherein the thickener is~~
25 a mixture of polycarboxylate and clay.
5. The composition according to any one of claims 1 to 4 wherein the
polysaccharide thickener is selected from cellulose, alkyl celluloses, alkoxy
celluloses, hydroxy alkyl celluloses, alkyl hydroxy alkyl celluloses, carboxy alkyl
celluloses, carboxy alkyl hydroxy alkyl celluloses, xanthan gum, guar gum, locust
30 bean gum, tragacanth gum, or derivatives thereof.

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6. The composition according to any one of claims 1 to 5 wherein the solvent is an alcohol.
7. The composition according to claim 6 wherein the alcohol is benzyl alcohol.
8. The composition according to any one of claims 1 to 6 wherein the solvent is a glycol ether.
9. The composition according to claim 8 wherein the glycol ether is selected from propylene glycol phenyl ether and ethylene glycol monohexyl ether.
10. The composition according to any one of claims 1 to 19 wherein the abrasive material is a carbonate.
11. A liquid cleaning and disinfecting composition comprising:
from about 0.01 to about 2 wt% of an alkaline source;
from about 0.01 to about 20 wt% of at least one anionic surfactant;
from about 0.1 to about 10 wt% of at least one clay thickener with at least one further thickener selected from polysaccharides, polycarboxylates, polyacrylamides;
from about 0.1 to about 10 wt% of a solvent selected from alcohols, glycol ethers, and mixtures thereof;
from about 1 to about 40 wt% of at least one abrasive material selected from oxides, carbonates, quartzes, siliceous chalk, diatomaceous earth, colloidal silicon dioxide, alkali metasilicates, organic abrasive materials selected from polyolefins, polyethylenes, polypropylenes, polyesters, polystyrenes, acetonitrile-butadiene-styrene resins, melamines, polycarbonates, phenolic resins, epoxies and polyurethanes, natural materials selected from rice hulls, corn cobs, and the like, nepheline syenite, or talc and mixtures thereof;
water; and
optionally, one or more materials selected from further surfactants, perfumes and perfume stabilizers, builders, rheology stabilizers; pH and buffering agents, electrolytes, pigments, and colorants.

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12. The composition according to claim 11 wherein the alkaline source is selected from alkaline metal hydroxides, carbonates, bicarbonates, and mixtures thereof.
13. The composition according to any one of claims 11 and 12 wherein the thickener is a mixture of polysaccharide and clay.
- 5 14. The composition according to any one of claims 11 and 12 wherein the thickener is a mixture of polycarboxylate and clay.
- 10 15. The composition according to any one of claims 11 to 14 wherein the polysaccharide thickener is selected from cellulose, alkyl celluloses, alkoxy celluloses, hydroxy alkyl celluloses, alkyl hydroxy alkyl celluloses, carboxy alkyl celluloses, carboxy alkyl hydroxy alkyl celluloses, xanthan gum, guar gum, locust bean gum, tragacanth gum, or derivatives thereof.
16. The composition according to any one of claims 11 to 15 wherein the solvent is an alcohol.
17. The composition according to claim 16 wherein the alcohol is benzyl alcohol.
- 15 18. The composition according to any one of claims 11 to 15 wherein the solvent is a glycol ether.
19. The composition according to claim 18 wherein the glycol ether is selected from propylene glycol phenyl ether and ethylene glycol monohexyl ether.
- 20 20. The composition according to any one of claims 11 to 19 wherein the abrasive material is a carbonate.